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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,422

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EXAMINER

MAI, TIEN HUNG

ART UNIT

PAPER NUMBER

2836

MAIL DATE

DELIVERY MODE

10/06/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/565,422	Applicant(s) SHATO ET AL.	
	Examiner TIEN MAI	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's response of 07/18/2008 has been entered and considered. Upon entering amendment, claims 1 and 2 have been amended; claims 3-11 have been cancelled; claim objections has been withdrawn.

Response to Restriction

Applicant's election without traverse of claims 1-6 in the reply filed on 7/18/08 is acknowledged.

Claim Objections

2. Claims 1 and 2, it is not understood what is meant by "with chromium enriched on their surfaces" in line 10 and 15, respectively. For purpose of examination, the above limitation is interpreted as "with chromium enriched on surfaces of the oxide films".

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (US 5,506,071 "Tanaka").

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5. **In re claim 1**, Tanaka discloses sealing electrode and surge absorber using the same; the apparatus (figs. 1a and 1b) comprising: an insulating member (13b) having a conductive film (13a) divided by a discharge gap (13c) interposed therebetween; a pair of main discharge electrode members (11 and 12) containing chromium and one or more of iron and nickel (col. 5, lines 66-67), opposite to each other; an insulating tube (10) fitted to the pair of main discharge electrode members opposite to each other to seal both the insulating member and a sealing gas (14) inside thereof; and oxide films (11c) having a thickness, formed on main discharge surfaces of the pair of main discharge electrode members by performing an oxidation treatment (col. 5, line 66 – col. 6, line 5).

6. With regard to chromium enriched on surfaces of oxide films, Tanaka discloses in col. 4, lines 56-60 that the electrode member (11a) having a copper thin film (11b) thereon is placed under an atmosphere of oxygen at a high temperature, and cooled to form the copper oxide film (11c) on the surface of the copper thin film (11b) (see fig. 1a). It will be appreciated by those skilled in the art that, chromium oxide films is made in the same process as copper oxide (col. 5, lines 67 - col. 6, line 5). Therefore, Tanaka's electrode member (11) includes oxide films with chromium enriched on surface of oxide film, formed on main discharge surfaces of the pair of main discharge electrode members by performing an oxidation treatment.

7. Tanaka discloses the claimed invention except for the main discharge electrode member contacting the conductive film. Tanaka rather discloses a cap electrode is being disposed in between the main discharge electrode members and the conductive

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film. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to eliminate the cap electrode, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

8. Tanaka does not explicitly disclose the oxide films having an average thickness in the range of 0.01 to 2.0 micron; this is viewed to be optimum value, which is dependent upon the operating condition and design requirement. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Tanaka by setting oxide film thickness to some specific value, since when the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. See *In re Aller*, 220, F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

9. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka in view of Shigemori et al. (US 4,410,831 "Shigemori").

10. **In re claim 2**, Tanaka discloses sealing electrode and surge absorber using the same, the apparatus (figs. 1a and 1b) comprising: a column-shaped insulating member (13b and see col. 4, lines 64-65) having a conductive film (13a) divided by a discharge gap (13c) interposed in an intermediate of a peripheral surface; a pair of main discharge electrode members (11 and 12) containing chromium and one or more of iron and nickel (col. 5, lines 66-67), opposite to each other on both ends of the insulating member; an

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insulating tube (10) fitted to the pair of main discharge electrode members opposite to each other to seal both the insulating member and a sealing gas (14) inside thereof, wherein the main discharge electrode members (see reproduced figure on the next page) comprising: peripheral portions attached to the insulating tube by brazing filler metal (col. 5, lines 17-25); protrusive supporting portions protruding toward an inside and an axial direction of the insulating tube and supporting the insulating member in the radial inner surface thereof, and oxide films (11c) having a thickness, formed on main discharge surfaces of the protrusive supporting portions of the pair of main discharge electrode members opposite to each other, by performing an oxidation treatment (col. 5, lines 17-25).

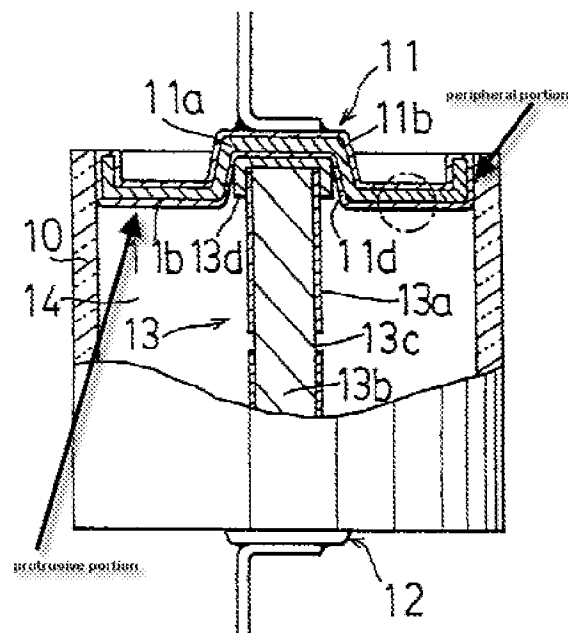
11. With regard to chromium enriched on surfaces of oxide films, Tanaka discloses in col. 4, lines 56-60 that the electrode member (11a) having a copper thin film (11b) thereon is placed under an atmosphere of oxygen at a high temperature, and cooled to form the copper oxide film (11c) on the surface of the copper thin film (11b) (see fig. 1a). It will be appreciated by those skilled in the art that, chromium oxide films is made in the same process as copper oxide (col. 5, lines 67 - col. 6, line 5). Therefore, Tanaka's electrode member (11) includes oxide films with chromium enriched on surface of oxide film, formed on main discharge surfaces of the pair of main discharge electrode members by performing an oxidation treatment.

12. Tanaka discloses the claimed invention except for the main discharge electrode member contacting the conductive film. Tanaka rather discloses a cap electrode is being disposed in between the main discharge electrode members and the conductive

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film. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to eliminate the cap electrode, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

13. Tanaka does not explicitly disclose the peripheral portions attached to end faces of the insulating tube. In the same field of endeavor, Shigemori discloses peripheral portions of discharge electrode members attached to end faces of an insulating tube (1) (see fig. 1). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Tanaka and employ the peripheral portions of the discharge electrode members attached to end faces of the insulating tube, as taught by Shigemori, in order to keep the insulating tube in place.



Response to Arguments

14. Applicant's arguments filed 07/18/2008 have been fully considered but they are not persuasive for the reason discussed below.

15. Applicant argues that "the examiner contends that Tanaka's description of a "comparison example" which includes electrodes made of an alloy including chromium and chromium oxide film is comparable to "chromium enriched on the surface of the oxide films" simply because an alloy to be homogeneous mixture of various elements". The examiner respectfully disagrees, as discussed in rejection section, Tanaka discloses in col. 4, lines 56-60 that the electrode member (11a) having a copper thin film (11b) thereon is placed under an atmosphere of oxygen at a high temperature, and cooled to form the copper oxide film (11c) on the surface of the copper thin film (11b) (see fig. 1a). It will be appreciated by those skilled in the art that, chromium oxide films is made in the same process as copper oxide (col. 5, lines 67 - col. 6, line 5). Therefore, Tanaka's electrode member (11) includes oxide films with chromium enriched on surface of oxide film, formed on main discharge surfaces of the pair of main discharge electrode members by performing an oxidation treatment.

16. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., chromium oxide films) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir.

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1993). In the instant case, the oxide films, which recited in the claim, were not so limited.

17. Similar arguments apply to claim 2.

18. For the reasons discussed above, the rejections are maintained.

Conclusion

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

20. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIEN MAI whose telephone number is (571)270-1277. The examiner can normally be reached on M-Th: 7:00-5:00.

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22. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Michael J Sherry/

Supervisory Patent Examiner, Art Unit 2836

/Tien Mai/

Examiner, Art Unit 2836